

TWO NEW SPECIES OF STIPA FROM PERU

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Stipa wurdackii Tovar, sp.nov.

Perennis caespitosa; culmi erecti 60-65 cm. alti; vaginæ internodiis breviores; ligula 0.2-0.3 mm. longa; laminae involutae vel planæ, 5-15 cm. longæ; paniculæ 15 cm. longæ, ramis adscendentibus in parte inferiore nudis; spiculæ 5.5-6.5 mm. longæ; glumæ aequales vel subæquales, acutæ vel subacuminatae, pupureæ, glabrae; lemma 3.5-3.8 mm. longum, fusiforme, sparse pubescente, arista 17-20 mm. longa, flexuosa, minute scabrida.

Cespitose perennial; culms 60-65 cm. tall, erect, glabrous, 2- or 3-noded, the nodes glabrous; sheaths shorter than the internodes; ligule about 0.2-0.3 mm. long; blades involute or flat, the uppermost 5-15 cm. long, those of the innovations shorter than those of the culm; panicle long-exserted, 15 cm. long, the branches slender, ascending or somewhat spreading, naked on the lower half, minutely pubescent, the pedicels usually shorter than the spikelets; spikelets 5.5-6.5 mm. long; glumes equal or nearly so, acute or subacute, purple, the tip hyaline, glabrous; lemma 3.5-3.8 mm. long, fusiform, sparsely pubescent, summit of the lemma narrowed, cylindrical forming a short neck and crown scarcely ciliate-pubescent, awn 17-20 mm. long, flexuous, slightly twisted and minutely scabrous on the lower half.

Type in the U.S.National Herbarium, No 2382275, collected at summit of Puma-urcu southeast of Chchapoyas, Provincia Chachapoyas, Departamento Amazonas, Peru, altitude 3100-3200 meters, July 3, 1962, by John J. Wurdack (No 1152).

This species is related to Stipa mexicana Hitchc., which differs in having the terete lemma and conspicuously pubescent awn.

Stipa vargasii Tovar, sp.nov.

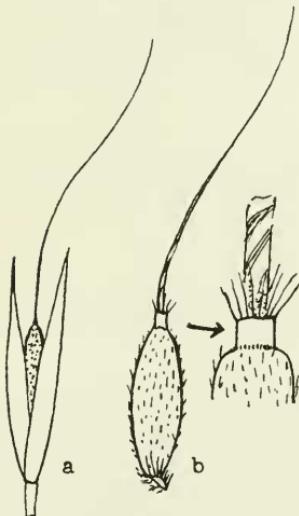
Perennis caespitosa; culmi erecti 35-45 cm. alti; vaginæ sparse pubescens, suprema basin paniculæ aequans; ligula 1 mm. longa; laminae involutae, 10-15 cm. longa, supra pubescens, infra glabrae, marginibus scabrae; paniculæ 12-16 cm. longæ, supra pubescens, infra glabrae, marginibus scabrae; paniculæ 12-16 cm. longæ, paulo laxæ, ramis gracilibus appressis basi nudis; pedicelli quam spiculis breviores, minute pubescentes; spiculæ 7.5-8 mm. longæ, pupureæ; glumæ aequales vel subæquales, membranaceæ, setaceæ; lemma 6-7 mm. longum, terete, basi sparse pubescente, apice ciliato-pubescente, pilis 0.7-1 mm. longis, arista 30 mm. longa, bigeniculata, pubescens;

*antherae* 2.8 mm. longae.

Cespitose perennial; culms 35-45 cm. tall, erect, glabrous, 2-noded; sheaths sparsely pubescent, the uppermost reaching the base of the panicle; ligule 1 mm. long, surrounded by numerous hirsute hairs; blades involute, 10-15 cm. long, somewhat setaceous, pubescent above, glabrous or nearly so beneath, the margins rather scabrous; panicle 12-16 cm. long, more or less lax, the slender branches appressed or somewhat ascending, naked below; pedicels usually shorter than the spikelets, minutely pubescent; spikelets 7.5-8 mm. long, purple; glumes equal or nearly so, somewhat setaceous membranaceous, hyaline toward the summit; lemma 6-7 mm. long, terete, pubescent along the central nerve at the base, the summit of the lemma narrowed, with numerous ciliate-hairs on the tip, these 0.7-1 mm. long, the awn usually bigeniculate, 30 mm. long, twisted below the bend, pubescent toward the base; the callus hairs dense, hirsute; anthers 2.8 mm. long.

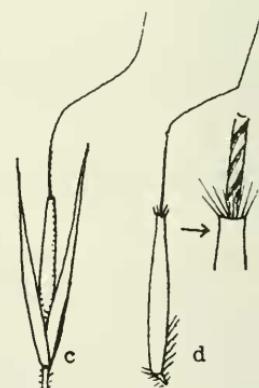
Type in the U.S.National Herbarium, No 2474222, collected at laderas de Tarpata, Provincia Urubamba, Departamento Cuzco, Peru, altitude 2860-3000 meters, March 8, 1963, by César Vargas (No 14127).

This species is closely related to *Stipa gilliesii* Hitchc., which differs in having lanceolate glumes, glabrous pedicels and the lemma pubescent on the lower half.



*Stipa wurdackii*.

a. spikelet; b. lemma



*Stipa vargasii*.

c. spikelet; d. lemma